## PATENT ABSTRACTS OF JAPAN

(11)Publication number:

08-302341

(43)Date of publication of application: 19.11.1998

(51)Int.Cl.

C09K 11/06 H05B 33/14

(21)Application number: 07-127149

(71)Applicant: RICOH CO LTD

HODOGAYA CHEM CO LTD

(22)Date of filing:

27.04.1995

(72)Inventor: NAGAI KAZUKIYO

ADACHI CHIHAYA TAMOTO NOZOMI ANZAI MITSUTOSHI MURAKAMI YASUO

## (54) ORGANIC EL ELEMENT

(57)Abstract:

PURPOSE: To obtain an organic EL element having excellent durability by making a single organic compound layer sandwiched between an anode and a cathode or at least one of a plurality of organic compound layers sandwiched between an anode and a cathode from an organic compound represented by a specified formula.

CONSTITUTION: To form an element wherein a laminate that is composed of layers each having a thickness of about 10–1000nm and that has an overall thickness of about 0.5m or below is sandwiched between an anode and a cathode by, e.g. vacuum deposition, an anode of, e.g. tin indium oxide is formed on a glass substrate, and a hole transport layer made of, e.g. a compound containing at least two aromatic tert. amines is formed on the anode. An organic luminous layer made from a pyrene derivative represented by the formula (wherein R1 to R3 are each alkyl or aryl; R4 is H, alkyl or alkoxy; n is 1–3, and –X– is arylene or a bivalent heterocyclic ring) is laid on the hole transport layer, and an electron transport layer made from, e.g. an oxadiazole derivative is formed on the organic luminous layer. A cathode made of an MgAg alloy is laid on the electron transport layer to obtain an organic EL element.

$$\begin{array}{c} R^{1} \\ V - (\hat{x}) - K \\ R^{2} \end{array}$$

$$(R^{4})_{0}$$